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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Atul Puri

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6019

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05/16/2005

Samuel H. Dworetsky  
AT&T CORP.  
One AT&T Way  
Room RA-207  
Bedminster, NJ 07921

EXAMINER

WONG, ALLEN C

ART UNIT

PAPER NUMBER

2613

DATE MAILED: 05/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/874,872	<b>Applicant(s)</b> PURI ET AL.	
	<b>Examiner</b> Allen Wong	<b>Art Unit</b> 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/5/01</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed 1/24/05 have been fully read and considered but they are not persuasive.

Regarding lines 9-11 on page 2 of applicant's remarks, applicant states that claim 1 is patentable for different reasons than claims 9, 13, 15, 18, 21, 23 and 25. The examiner respectfully disagrees. As stated before, claim 9 embodies all of the broad limitations of claims 1, 13, 15, 18, 21, 23 and 25 because the claim language in these claims are very similar to one another as stated in the rejection below, and it will be explained below.

Regarding lines 16-18 and lines 22-23 on page 2 of applicant's remarks, applicant states that Lee fails to disclose the assigning of a predefined model to each video portion according to a characteristic of the video portion. The examiner respectfully disagrees. In col.42, ln.47-61, Lee discloses each video object has an arbitrary shape, and that each video object is predefined according to its shape, an arbitrary shape of a video object. In fact, Lee specifically states that each object can have an arbitrary shape, so that each video object portion is assigned a predefined model and not just the identification of a shape. Thus, each video object or video portion is assigned a predefined model by a mask of alpha values or a binary mask which characteristics of the video portion is taken into account.

Regarding lines 5-6, lines 19-21 and lines 22-24 on page 3 of applicant's remarks, applicant states that the examiner never appears to address the routing each

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video content portion to one of a plurality of encoders. Applicant also states that Lee does not seem to suggest the "routing" limitation. The examiner respectfully disagrees on both accounts. The Lee reference does teach this limitation as stated in Lee's fig.33 where it clearly discloses the routing or the video content portion is routed or directed to plural video object coders 1504... 1508...etc. and as well as "routing decision" as done by the element 1502, the object definition section which routs or directs the video content portion to other plural object coders 1504... 1508...etc. These encoders 1504... 1508... etc. are not merely conventional encoders, these encoders are video object encoders that can encode video objects and other video object portions, video content portions that are associated with the plurality of predefined models, and/or video content data associated with generic models depending upon the needs. Therefore, Lee teaches the routing each video content portion to one of a plurality of encoders and broadly meets the "routing" limitation. Thus, the examiner has already addressed this issue in the previous Office Action and in this current Office Action.

Regarding lines 8-11 on page 3 of applicant's remarks, applicant argues that the Lee reference teaches away from the present invention. The examiner respectfully disagrees. The present invention pertains to coding of video data or portions and Lee invention, as stated in the abstract, pertains to the coding/decoding of video objects or video portions and shapes. So, Lee is considered to be relevant to the rejection of this case.

Regarding lines 22-24 on page 3 of applicant's remarks, applicant states that Lee does not teach the "routing" limitation of claim 1. The examiner respectfully disagrees.

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The examiner has already addressed this limitation in the above paragraphs and in the rejection. See the above. Claims 2-8 are dependent on claim 1 and are rejected for at least the same reasons as stated above.

Regarding lines 10-17 on page 4 of applicant remarks about claim 9, applicant states that Lee teaches away from the present invention about the encoders being merely generic with no association with any predefined models. The examiner respectfully disagrees. The examiner has already clearly analyzed and discussed this issue in the above paragraphs. See the above and the rejection. Claims 10-12 depend from claim 9 and are rejected for at least the same reasons as stated above.

Regarding lines 23-24 on page 4 of applicant's remarks about claim 13, applicant states that Lee fails to teach the assigning a video content portion to a related, predefined model chosen from a plurality of models or to a generic model and then encoding the video content portions with a generic encoder or an encoder from a plurality of encoders. The examiner respectfully disagrees. The examiner has already addressed the issues stated here in the above paragraphs and in the rejection. See the above and the rejection.

Regarding lines 3-4 on page 5 of applicant's remarks about claim 15, applicant states that Lee does not teach "routing" limitation. The examiner respectfully disagrees. The examiner has already discussed this issue in the above paragraphs. See the above and the rejection below. Claims 16-17 depend from claim 15 and are rejected for at least the same reasons as stated above.

Regarding lines 7-9 on page 5 of applicant's remarks about claim 18, applicant mentions that Lee does not disclose the limitations of claim 18 for the same reasons as claim 15. The examiner respectfully disagrees. The examiner has already discussed this issue in the above paragraphs. See the above and the rejection below. Claims 19-20 depend from claim 18 and are rejected for at least the same reasons as stated above.

Regarding 11-13 on page 5 of applicant's remarks about claim 21, applicant states that Lee only teaches using conventional encoders and makes no differentiation of which encoder to send objects to in fig.33. The examiner respectfully disagrees. The examiner has already discussed this issue in the above paragraphs. See the above and the rejection below. Claim 22 depend from claim 21 and is rejected for at least the same reasons as stated above.

Regarding lines 18-21 on page 5 of applicant's remarks about claim 23, applicant states that the examiner does not appear to compare claim 23 in his rejection analysis, and the extraction of characteristics of the video content and the inputting the video content into a manual extracting unit. The examiner respectfully disagrees. The rejection clearly states the "extraction" limitation in the rejection, and that in fig.33 and col.42, ln.34-38, Lee discloses the video object information is extracted and segmented from the input video sequence. Also, note fig.35 discloses extracting multiple video objects 1540, 1542 and 1544b. And finally, in fig.1, Lee discloses that Lee's teachings are applied in a computer system where computer 22 is connected to the input device 26 which can include at a keyboard, pointing device, mouse, etc. for inputting user or

manual commands for permitting the manual extraction of video content data. Thus, Lee discloses the "extraction" limitation as discussed above and in the rejection.

Regarding lines 25-26 on page 5 of applicant's remarks about claim 25, applicant mentions that the examiner does not appear to analyze claim 25 in the rejection and that Lee does not disclose extracting segments from video content comprising automatically extracting segments, manually extracting segments and choosing either the manually extracted segment or automatically generated signal via a switch. The examiner respectfully disagrees. The rejection clearly states the "extraction" limitation in the rejection, and that in fig.33 and col.42, ln.34-38, Lee discloses the video object information is extracted and segmented from the input video sequence. Also, note fig.35 discloses extracting multiple video objects 1540, 1542 and 1544b. And finally, in fig.1, Lee discloses that Lee's teachings are applied in a computer system where computer 22 is connected to the input device 26 which can include at a keyboard, pointing device, mouse, etc. for inputting user or manual commands for permitting the manual extraction of video content data or applying the automatic extraction of video content data via a switch. Lee's computer system permit extracting segments from video content comprising automatically extracting segments, manually extracting segments and choosing either the manually extracted segment or automatically generated signal via a switch. Thus, the broad limitations of claim 25 are met by Lee.

In conclusion, broad limitations of the claims are met, and thus, the rejection is sustained.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee (5,748,789).

Regarding claims 1, 9, 13, 15, 18, 21, 23 and 25, Lee discloses a method of encoding video content, the method comprising:

extracting video portions from video content (fig.33 and col.42, ln.34-38; note video object information is extracted and segmented from the input video sequence; also, note fig.35 discloses extracting multiple video objects 1540, 1542 and 1544b);

identifying video subsegments and regions of interest within the video portions (fig.33, element 1502, col.42, ln.34-46, and fig.35, note segments and subsegments of the regions of interest are identified);

assigning a predefined model to each video portion according to a characteristic of the video portion, the predefined model being chosen from a plurality of predefined models or a generic model (col.42, ln.47-61; note each video object has an arbitrary shape, and that each video object is predefined according to its shape, thus, each video object or video portion is assigned a predefined model by a mask of alpha values or a binary mask);

encoding video portions associated with the generic model with a generic



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encoder (fig.33 and col.42, ln.62-65; note object coders 1504-1508 encode video portions associated with the generic model); and

encoding video portions associated with the plurality of predefined models with a encoder chosen from a plurality of encoders, each of the plurality of encoders being associated with one of the plurality of predefined models (fig.33 and col.43, ln.10-15; note the multiplexer 1510 is used to multiplex and encode video portions from plural video object encoders 1504-1508).

Note claims 5-8, 14, 16, 19, 20, 22, 24 and 26 have similar corresponding elements.

Regarding claims 2-4, 10, 12 and 17, Lee discloses further comprising: producing descriptors associated with the video portions of the video content (col.51, ln.4-59; note there are plural flags that can aid the determination of the video portions of the video content); and

producing descriptors associated with the video subsegments and regions of interest (col.51, ln.4-59; note there are plural flags that can aid the determination of the video subsegments of the video content).

Regarding claim 11, Lee discloses further comprising:

encoding the descriptors associated with the video portions, video subsegments and regions of interest (fig.33, note the descriptors are encoded along with the video object information by encoders 1504-1508).

Regarding claims 27-29, Lee discloses a coded bitstream having portions of the bitstream encoded using different encoders according to models associated with the

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subject matter of each portion of the bitstream, the coded bitstream encoded according to the method of claims 1, 18 and 21, respectively (fig.33 and col.42, ln.62-65; note different video object coders 1504-1508 encode video portions associated with the generic model; col.43, ln.10-15; note the multiplexer 1510 is used to multiplex and encode video portions from plural different video object encoders 1504-1508).

### ***Conclusion***

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen Wong  
Primary Examiner  
Art Unit 2613

AW  
5/9/05